

# ABSTRACT

Imaging method and system including thermal noise  
5 reduction for ultrasonic and magnetic resonance images.  
In ultrasound imaging, this method provides thermal  
noise reduction and a reduction of artifacts in  
applications with contrast agents. The method includes  
the computation of a simple correlation function to be  
10 applied where two or more images or vectors of the same  
region of the body are provided. The signals relating  
to the images or the vectors are: combined by a weight  
function which, by comparing corresponding samples of  
the signals or vectors, assumes values in a range  
15 between a maximum value and a minimum value depending  
on the mutual correlation measure between the samples.  
The weight function is combined with the combination of  
the two response signals (P1, P2, MR1, MR2). The  
resulting signal is transformed into image data. The  
20 signals are processed based on the peculiarities of the  
selected imaging system.